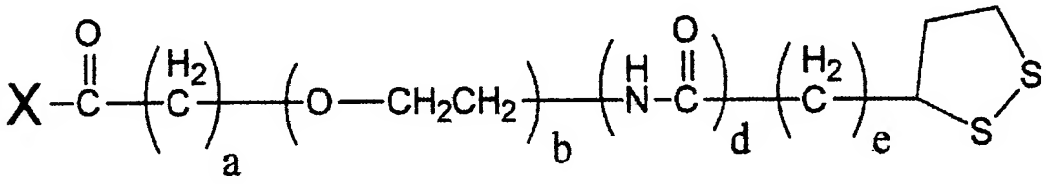
CLAIMS:

1. A linker compound of

a structure represented by following general formula (1), where a, b, d, e are independently an integer of 0 to 6, and

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof.

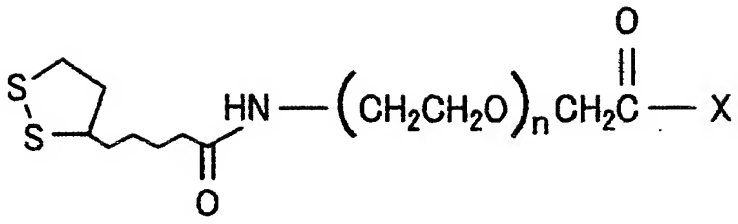


....(1)

2. The linker compound according to claim 1 of

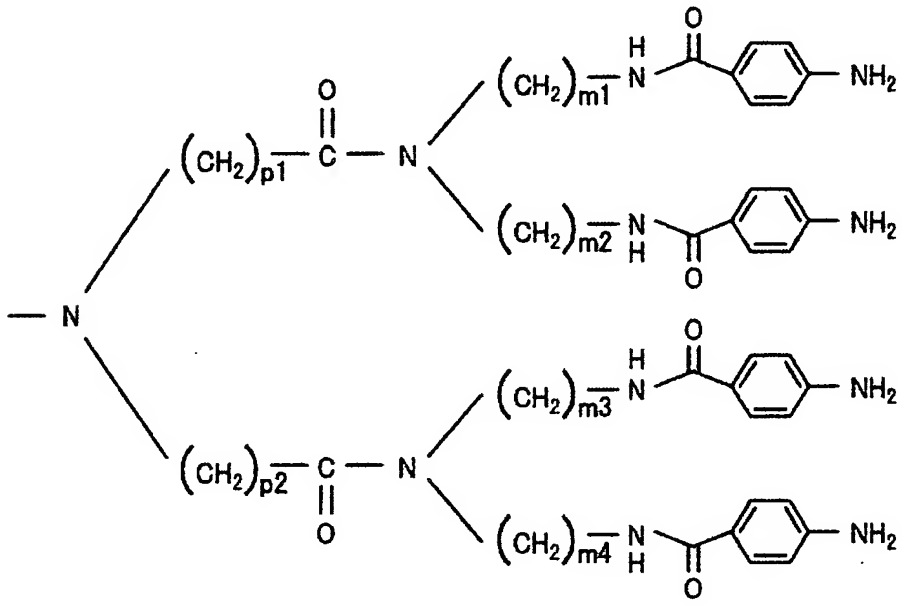
a structure represented by following general formula (2), where n is an integer of 1 to 6, and

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof.



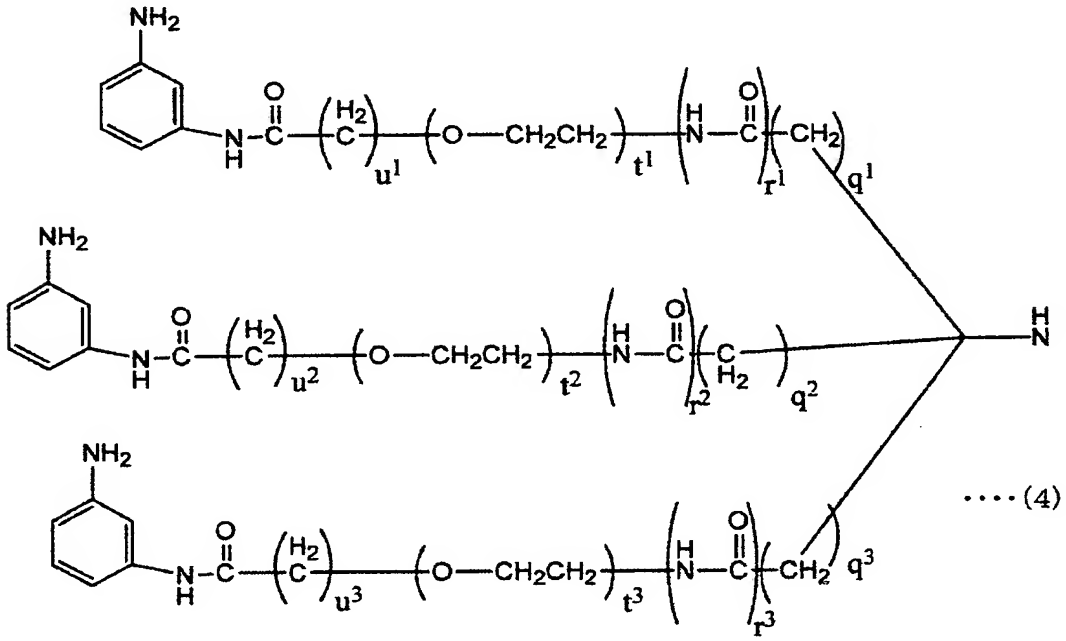
····(2)

3. The linker compound according to claim 1 or 2, where X has a structure represented by following general formula (3), wherein m^1, m^2, m^3, m^4, p^1, and p^2 are independently an integer of 1 to 6.



····(3)

4. The linker compound according to claim 1 or 2, where X has a structure represented by following general formula (4), wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.

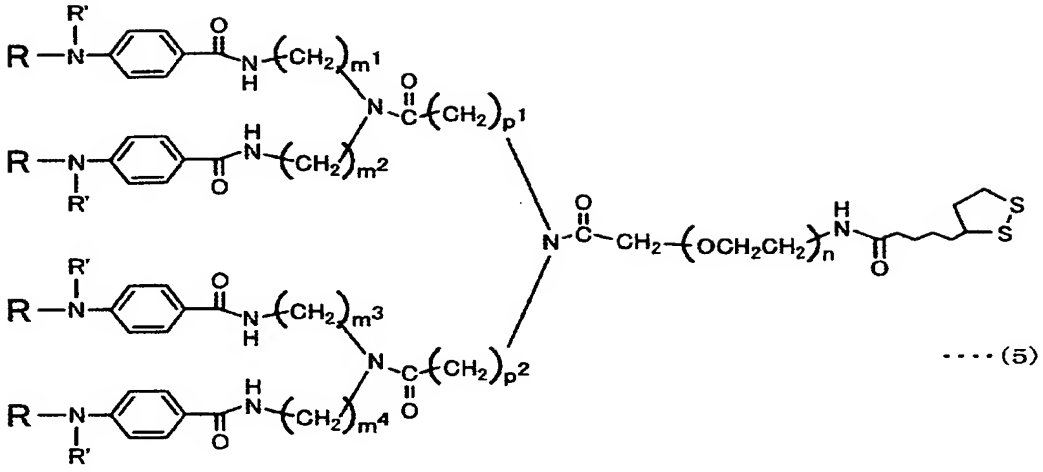


....(4)

5. A ligand conjugate including the linker compound according to any one of claims 1 through 4, wherein an aromatic amino group of the linker compound includes a sugar molecule introduced therein.

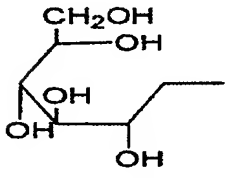
6. A ligand conjugate of

a structure represented by following general formula (5), where m^1, m^2, m^3, m^4, n, p^1, and p^2 are independently an integer of 1 to 6, R' is hydrogen (H) or R, and

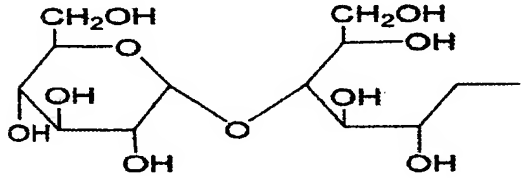


---- (5)

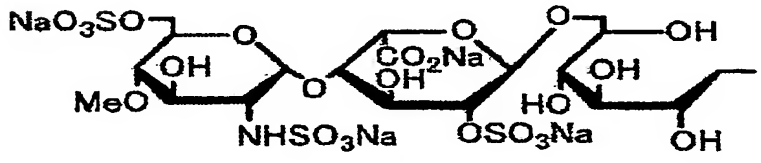
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



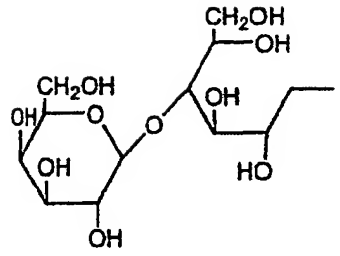
(6—1)



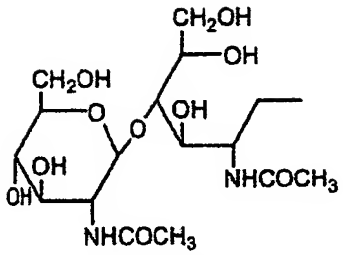
(6—2)



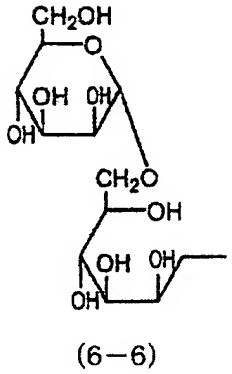
(6—3)



(6−4)



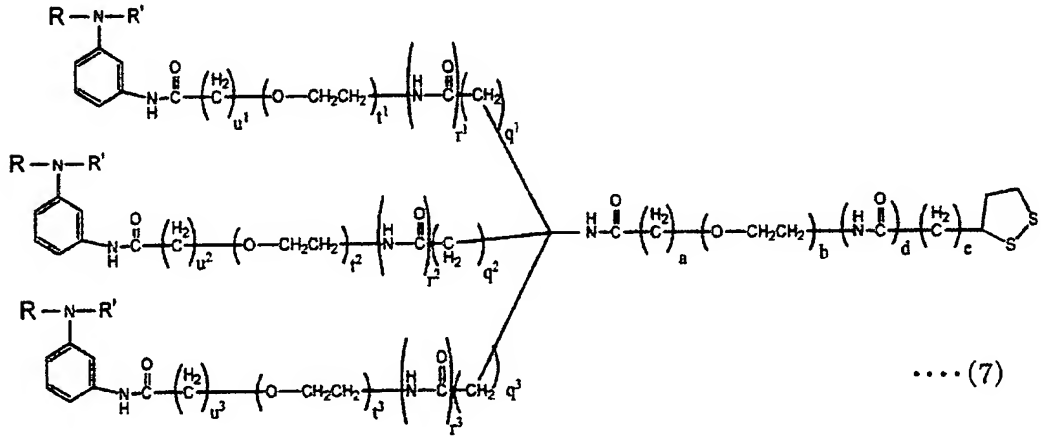
(6−5)



(6−6)

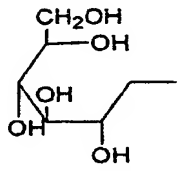
7. A ligand conjugate of

a structure represented by following general formula (7), where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6, t^1, t^2, and t^3 are not 0 when b is 0, b is not 0 when t^1, t^2, and t^3 are 0, R' is hydrogen (H) or R, and

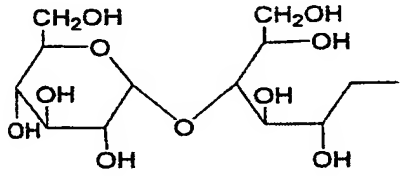


....(7)

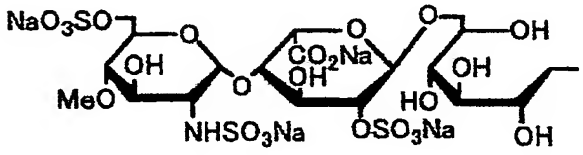
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



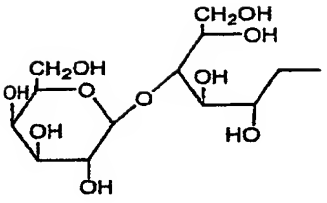
(6—1)



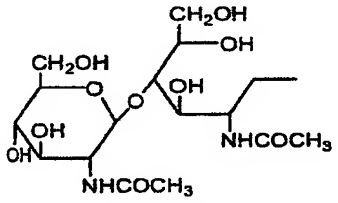
(6—2)



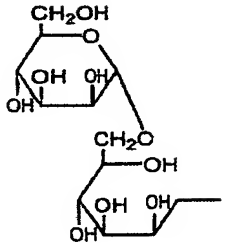
(6—3)



(6—4)



(6—5)



(6—6)

8. A producing method of a linker compound according to any one of claims 1 through 4, comprising the steps of:

carrying out a condensation reaction between thioctic acid and an amine compound including three or more branched chains each having an aromatic amino group end protected by a protecting group; and

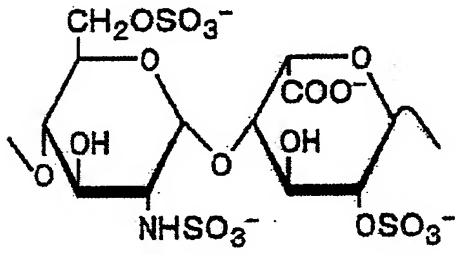
deprotecting the protecting group at the aromatic amino

group end.

9. A producing method of a ligand conjugate, comprising the step of carrying out a reductive amination reaction by using the linker compound of any one of claims 1 through 4 and a sugar molecule.

10. The producing method according to claim 9, wherein:

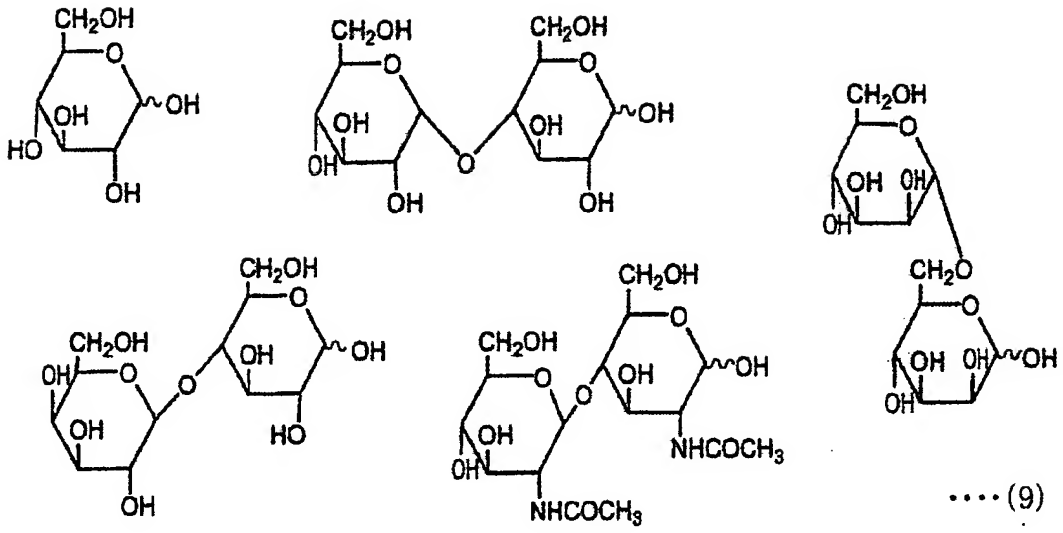
the sugar molecule is a sulfated oligosaccharide having a heparin partial structure of disaccharide unit represented by the following general formula (8).



····(8)

11. The producing method according to claim 9, wherein:

the sugar molecule is at least one oligosaccharide selected from the group (9).



....(9)

12. A sugar molecule introducing method of arranging a sugar molecule on a surface of a supporter, comprising the step of:

causing a solution containing the ligand conjugate of any one of claims 5 through 7 to come into contact with a supporter including metal on a surface thereof.

13. A ligand carrier which comprises the ligand conjugate of any one of claims 5 through 7 immobilized on a supporter including metal on a surface thereof.